

WHAT IS CLAIMED IS:

1. A pulse modulator comprising:
  - a delay arrangement for receiving a first regular sequence of pulses and for delaying each received pulse several times to obtain a plurality of regular sequences of pulses having different phases; and
  - a selection component for receiving from said delay arrangement a plurality of regular sequences of pulses having different phases, for receiving a modulating signal, wherein each possible value of said modulating signal is associated to one of said different phases, for selecting for each pulse of said first regular sequence of pulses a pulse of the respective regular sequence of pulses which sequence of pulses has a phase associated to a current value of said modulating signal, and for outputting said selected pulse as part of a pulse position modulated sequence of pulses.
- 20 2. A pulse modulator according to claim 1, wherein said selection component is a multiplexer.
- 25 3. A pulse modulator according to claim 1, wherein said delay arrangement comprises a shift register.
- 30 4. A pulse modulator according to claim 1, wherein said delay arrangement comprises a synchronization input for enabling a synchronization of delays applied by said delay arrangement to received pulses by means of a clock signal applied to said synchronization input.
5. A pulse modulator according to claim 1, further comprising a pulse generator for generating a regular

sequence of pulses and for providing said generated regular sequence of pulses as a first regular sequence of pulses to said delay arrangement and in addition as a clock signal to said selection component.

- 5        6. A pulse modulator according to claim 5, wherein said pulse generator further provides said generated regular sequence of pulses as a clock signal to said selection component.
- 10        7. A pulse modulator according to claim 5, wherein said pulse generator generates said pulses with a frequency which is equal to the frequency with which values of said modulating signal are provided to said selection component.
- 15        8. A pulse modulator according to claim 5, wherein said pulse generator comprises a control input for adapting the frequency of generated pulses to a frequency employed for said modulating signal which is provided to said selection component.
- 20        9. A pulse modulator according to claim 1, wherein said delay arrangement comprises a control input for adjusting delays applied by said delay arrangement to received pulses in accordance with a frequency employed for said modulating signal which is provided to said selection component.
- 25        30        10. A pulse modulator according to claim 4, further comprising a clock signal generator for generating said clock signal which is applied to said synchronization input of said delay arrangement,

wherein said clock signal generator comprises a control input for adjusting the frequency of said clock signal in accordance with a frequency employed for a modulating signal which is provided to said selection component.

- 5            11. A pulse modulator according to claim 1, further comprising a circuit for converting said pulse position modulated sequence of pulses output by said selection component into a corresponding pulse width modulated sequence of pulses.
- 10            12. A modulating system comprising a pulse modulator, which pulse modulator includes:
- 15            a delay arrangement for receiving a first regular sequence of pulses and for delaying each received pulse several times to obtain a plurality of regular sequences of pulses having different phases; and
- 20            a selection component for receiving from said delay arrangement a plurality of regular sequences of pulses having different phases, for receiving a modulating signal, wherein each possible value of said modulating signal is associated to one of said different phases, for selecting for each pulse of said first regular sequence of pulses a pulse of the respective regular sequence of pulses which sequence of pulses has a phase associated to a current value of said modulating signal, and for outputting said selected pulse as part of a pulse position modulated sequence of pulses.
- 25            13. A method of generating a modulated sequence of pulses, said method comprising the steps of:
- 30            generating a first regular sequence of pulses;

delaying each of said generated pulses several times to obtain a plurality of regular sequences of pulses having different phases, wherein each possible value of a provided modulating signal is associated 5 to one of said different phases;

selecting for each pulse of said first regular sequence of pulses a pulse of the respective regular sequence of pulses which sequence of pulses has a phase associated to a current value of said 10 modulating signal; and

providing a respectively selected pulse as part of a pulse position modulated sequence of pulses.

14. A method according to claim 13, wherein the delays 15 which are applied to said generated pulses are synchronized by a clock signal.

15. A method according to claim 13, wherein said pulses 20 of said first regular sequence of pulses are generated with a frequency which is equal to the frequency with which values of said modulating signal are provided.

16. A method according to claim 13, wherein said pulses 25 of said first regular sequence of pulses are generated with a frequency which is adapted to a frequency employed for said provided modulating signal.

30 17. A method according to claim 13, wherein the delays which are applied to said generated pulses are adjusted in accordance with said frequency employed for said provided modulating signal.

18. A method according to claim 14, wherein the frequency of said clock signal used for said synchronization is adjusted in accordance with a frequency employed for said provided modulating signal.

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19. A method according to claim 13, further comprising converting said provided pulse position modulated sequence of pulses into a corresponding pulse width modulated sequence of pulses.

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